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10/776,004	02/10/2004	David paul Yach	1578.106 (11428-US-PAT)	9095
54120 7590 09/12/2008 RESEARCH IN MOTION ATTN: GLENDA WOLFE BUILDING 6, BRAZOS EAST, SUITE 100 5000 RIVERSIDE DRIVE IRVING, TX 75039				
EXAMINER				
TIMBLIN, ROBERT M				
ART UNIT		PAPER NUMBER		
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/776,004

Applicant(s)

YACH ET AL.

Examiner

ROBERT TIMBLIN

Art Unit

2167

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 6/17/2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1, 2 and 4-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-2, 4-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/CDC)
- 4) ☐ Interview Summary (PTO-413)
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____
- Paper No(s)/Mail Date _____

DETAILED ACTION

This Office Action corresponds to application 10/776,004 filed 2/10/2004.

Response to Amendment

Claims 1, 4-5, 8, 9 and 15-20 have been amended. Accordingly, claims 1-2 and 4-20 are pending prosecution. Examiner further wishes to note that the Application No. at the top of the submitted reply (i.e. claims and remarks) reads "10/788,973" and should be corrected to indicate response to Application No. 10/776,004, which is respective to the present application.

Claim Objections

With response to the claim amendments, the prior claim objections have been withdrawn in view of the appropriate corrections.

However, in view of the amended claims, claim 1 is objected to because the comma after "mobile node" in the first line of the limitation beginning "a content retriever embodied..." should be removed for a grammatical correction.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

In review of claim 1 and depending claims 4, and 4-14 these claims are rejected under 35 U.S.C. 101 because the claims are directed towards an apparatus that may be construed as a

software apparatus. In other words, the claims may be construed as software *per se* and thus functional descriptive material (i.e. see MPEP 2106.01). For example, Applicant's 'apparatus' comprises a hash generator or a content retriever that may be interpreted by one of skill in the art to be software components. When claims 1-2, and 4-14 positively claim hardware components of the apparatus, this may lead one to interpret the claims as a hardware apparatus and thus making the claims statutory.

Claim Rejections - 35 USC § 112

The prior 112 rejections have been withdrawn in light of the present amendments to the restoration of paragraph [0041] to support the computation of hash functions.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1 – 2 and 4 – 19 are rejected under 35 U.S.C. 102(b) as being anticipated by **Hunt et al.** (Hunt hereafter) U.S. Patent Application 2003/0005306. In the following, Hunt teaches

Regarding claim 1, **Hunt** teaches In a radio communication system, having a network part that maintains at least a network-copy of a first database containing data and a mobile node that maintains at least a mobile-copy of the first database [110] containing data, the data of the

network-copy and the mobile-copy of the first database, respectively, correspond when the network-copy and the mobile-copy of the first database are in match with one another, an apparatus for altering the data of at least one of the network-copy and the mobile-copy of the at least the first database to place the network-copy and the mobile-copy in match with each other, said apparatus comprising:

a hash generator (0027; e.g. a hashing function) embodied at the mobile node (0013; i.e. the message digests (hashes; para 0015) are generated on the client) and adapted to receive representations of a substantially complete copy of at least the mobile-copy of the at least the first database (0031), said hash generator (0027) forming a hash value (0015) from said substantially complete copy of the representations provided thereto (0032, figure 6), a hash value formation by the hash generator (0027) being different from a checksum (0015, 0027), its formation being triggered when the network-copy first data base and the mobile-copy of the first data base are suspected of being out of synchronization with each other (0031 and figure 5), the hash value (0015) for communication to the network part (0033; e.g. the repository) to determine whether the network-copy and the mobile-copy are in match with one another (drawing reference 510, 610) for providing "fingerprinted" message digests of files (Hunt, 0027).

a content retriever drawing reference 125) embodied at the mobile node (figure 2 client) retrieving data from the mobile-copy of the at least the first database upon detection of determination that the network-copy and the mobile-copy are out of match (figure 2 and 5; e.g. the client and repository are synchronized to suggest a transfer of data between a mobile and network part), the data retrieved by said content retriever for communication to the network part, to be used to match the network-copy and the mobile-copy to each other (0029; i.e. the synchronization of the client and repository)

Regarding claim 2, **Hunt** additionally shows said hash generator generates the hash values of a copy of at least the mobile-copy of the at least first database responsive to an external triggering event (e.g. a synchronization event), occurrence of which is detectable at the mobile node. Hunt additionally discloses the hash generating function as seen in relation to claim 1.

Regarding claim 4, **Hunt** additionally teaches said hash generator generates first-type hashes upon detection of an external triggering event, indications of occurrence of which is detectable at the mobile node and wherein said hash generator generates second-type hashes responsive to determination of mismatch of the first-type hashes, generated by said hash generator, with network-calculated values (i.e. figures 5 and 6 teach the synchronization process as well as a verification process in which hash values are computed).

Hunt additionally teaches the second-type hashes being different from checksums (0015).

Regarding claim 5, **Hunt** additionally teaches the data maintained at the network-copy and the mobile-copy of the at least the first database is comprised of data records, each data record formed of fields including at least a first key field and at least a first record field, and wherein the second-type hashes generated by said hash generator are formed of values of the at least the first key field (0027).

Regarding claim 6, **Hunt** additionally teaches the determination that the network-copy and the mobile-copy are out of match is made responsive to values of the second-type hashes formed of the values of the at least the key field. (see figure 6, verification process).

Regarding claim 7, **Hunt** additionally teaches the data retrieved by said content retriever comprises both the at least the first key field and the at least the first record field. (0030).

Regarding claim 8, **Hunt** teaches the apparatus of claim 1 further comprising:

a determiner adapted to receive values of the hash generated by said hash generator, said determiner for determining whether the values of the hash correspond with locally-generated values (figure 5 synchronization process); and

a requestor coupled to said determiner to receive indications of determinations made thereat, said requestor requesting additional information associated with the mobile-copy of the at least the first database (figure 6, verification process).

Regarding claim 9, **Hunt** additionally teaches the hash generated by said hash generator is of a first hash-type and at least a second hash-type, said second hash type being different from a checksum and wherein the locally-generated values with which said determiner compares the hash are correspondingly of a first hash-type and a second hash-type (figures 5 and 6; e.g. Hunt discloses in a synchronization and verification process, a hash and new hash are generated to disclose a first and second type hash).

Regarding claim 10, **Hunt** additionally teaches the additional information requested by said requestor comprises a request for the mobile node to deliver hash information of the second hash-type to the comparator (0025).

Regarding claim 11, **Hunt** additionally teaches the data maintained at the network-copy and the mobile-copy of the at least the first database is comprised of data records (0024) and wherein the additional information requested by said requester comprises a request for the mobile node to deliver values of at least portions of the data records (0028).

Regarding claim 12, **Hunt** teaches a comparator adapted to receive the values of the at least the portions of the data records responsive to the request therefor to the mobile node, said comparator for comparing the values with corresponding values of the network-copy of the at least the first database. (figures 5 and 6; e.g. drawing references 510, 610).

Regarding claim 13, **Hunt** teaches a database value updater coupled to said comparator, said database value updater operable responsive to comparisons made by said comparator to alter at least one data record of a selected one of the mobile-copy and the network-copy of the at least the first database. (figure 5, drawing reference 520).

Regarding claim 14, **Hunt** teaches database value updater operates pursuant to a selected conflict resolution protocol. (figure 5, e.g. as part of a synchronization process).

Regarding claim 15, **Hunt** teaches a method of communication in a radio communication system, having a network part that maintains at least a network-copy first database containing data and a mobile node that maintains at least a mobile-copy first database containing data the data of the network-copy and the mobile-copy of the first database, respectively, correspond when the network-copy and the mobile-copy of the first database are in match with one another

said method for altering the data of at least one of the network-copy and the mobile-copy of the at least the first database to place the network-copy and the mobile-copy in match with each other said method comprising:

generating a first hash value in the mobile node (drawing reference 315) from a complete copy of the mobile-copy of the first data base (figure 4) when the network-copy and the mobile copy are suspected of being out of synchronization with each other (0013; e.g. a need for synchronization is determined), said first hash value being different from a checksum (0015);

sending the first hash value from the mobile node to the network part (drawing reference 415 and paragraph 0030), the first hash value being representative of the mobile-copy of the first database (drawing references 405 and 410);

comparing, at the network part (0028), the first hash value sent during said operation of sending with corresponding network-copy of the first hash value (drawing reference 415); and

requesting additional information [generating new hashes, drawing reference 605] regarding the mobile-copy first database responsive to comparisons made during said operation of comparing the first hash value. (figure 6; i.e. verification of a synchronization process).

Regarding claim 16, **Hunt** additionally teaches the additional information requested during said operation of requesting comprises second hash information from the mobile node to the network part, the second hash value being different from a checksum representative of the mobile copy of the at least the first database. (See column 4, lines 62 – 65 “If the indications are that changes have been made, then checksums for the separate parts of the remote personal database can be calculated and compared to the checksums for the separate parts of the remote personal database.”)

Regarding claim 17, **Hunt** additionally teaches sending the second hash information from the mobile node to the network part (drawing reference 415); comparing, at the network part, the second hash information sent during said operation of sending the second hash information with corresponding network-copy second hash information (0028 and drawing reference 510); and

requesting at least portions of the mobile-copy of the at least the first database responsive to comparisons made during said operation of comparing the second hash information (drawing reference 605).

Regarding claim 18, **Hunt** additionally teaches the operations of delivering the at least the portions of the mobile-copy to the network part, comparing the portions of the mobile copy delivered during said operation of delivering with corresponding portions of the network-copy of the at least the first database, and causing overwriting of the portions of a selected one of the network-copy and the mobile-copy responsive to comparisons made during said operation of comparing the portions of the mobile-copy. (Figure 5; i.e. performing the corresponding updates).

Regarding claim 19, **Hunt** additionally teaches the selected one of the network-copy and the mobile-copy of which the portions thereof are caused to be overwritten is selected according to a conflict resolution scheme. (i.e. synchronization due to a synchronization/verification process).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hunt in view of Boothby (U.S. Patent 5,684,990).

Regarding claim 20, **Hunt** does not expressly teach the operation of creating a change-history by indicating overwriting of the portions selectively caused during said operation of selectively causing.

Boothby, however, teaches the operation of creating a change-history by indicating overwriting of the portions selectively caused during said operation of selectively causing (col. 4 line 25; i.e. "synchronization depends on knowledge of (2) the history of updates in each database" and further col. 6 line 10-15; i.e. "for every desktop record, the synchronization program takes not of the record's status, i.e., whether a corresponding status file record exists, and if so, whether that record has changed) for providing a history of changes that were caused.

In the same field of endeavor, (i.e. data synchronization), it would have been obvious to one of ordinary skill in the data processing art at the time of the present invention to combine the teachings of the cited references because Boothby would have given Hunt a history of changes to determine what changes have been made and to keep track of those changes. Ultimately, in the

database art, this provision would have benefited Hunt in a way for backup in case possible of failure or other data loss (as taught by Boothby in col. 3 line 65-67).

Response to Arguments

Applicant's arguments pertaining to the 101 rejection of 1 and its depending claims in the reply filed 6/17/2008 have been fully considered but they are not persuasive.

In response to applicant's arguments filed 6/17/2008, the traversal response (first sentence of page 11) that "software certainly can qualify as structure supporting means-plus-function claim" is found unpersuasive by the Examiner. Specifically, claim 1 and its dependents have not been treated under 35 U.S.C. 112 6th paragraph as to meet the requirements of a means-plus-function claim (see MPEP 2181 regarding the analysis for a claim to invoke 35 U.S.C. 112 6th paragraph interpretation).

Furthermore, in the second paragraph of page 11 of the reply, Applicant concedes that the apparatus is a functionality "performed by **software** or hardware." The Examiner maintains that because the apparatus is not solely limited to hardware embodiments (in other words may be a software application) that the claims remain nonstatutory under 35 U.S.C. 101 as indicated in the rejection above.

In response to the 35 U.S.C. 102 rejection to Leonetti, the applicant argues that the reference does not teach the claimed hash function being different from a checksum. In careful review of the reference, Leonetti is agreed upon to not explicitly teach the required "hash" value which is different from a checksum and therefore is withdrawn from the rejection. However,

upon a new ground of rejection necessitated by the amendment, the new reference authored by Hunt et al. is seen to disclose the use of hash values for a synchronization process between a client and server (i.e. mobile node and network part). Further arguments in this respect are moot in view of the new ground of rejection.

Relevant prior art

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

U.S. Patent Application 2002/0046296 to Kloba et al. The subject matter disclosed therein pertains to the pending claims (i.e. synchronization using hash comparisons – e.g. paragraphs 0298-0309).

U.S. Patent Application 2005/0071386 to Wolfgang et al. The subject matter disclosed therein pertains to the pending claims (i.e. hashing database portions for comparison and synchronizations – e.g. paragraph 0030).

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period

will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ROBERT TIMBLIN whose telephone number is (571)272-5627. The examiner can normally be reached on M-F 8:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John R. Cottingham can be reached on 571-272-7079. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/ROBERT TIMBLIN/

Examiner, Art Unit 2167

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/Luke S. Wassum/
Primary Examiner
Art Unit 2167